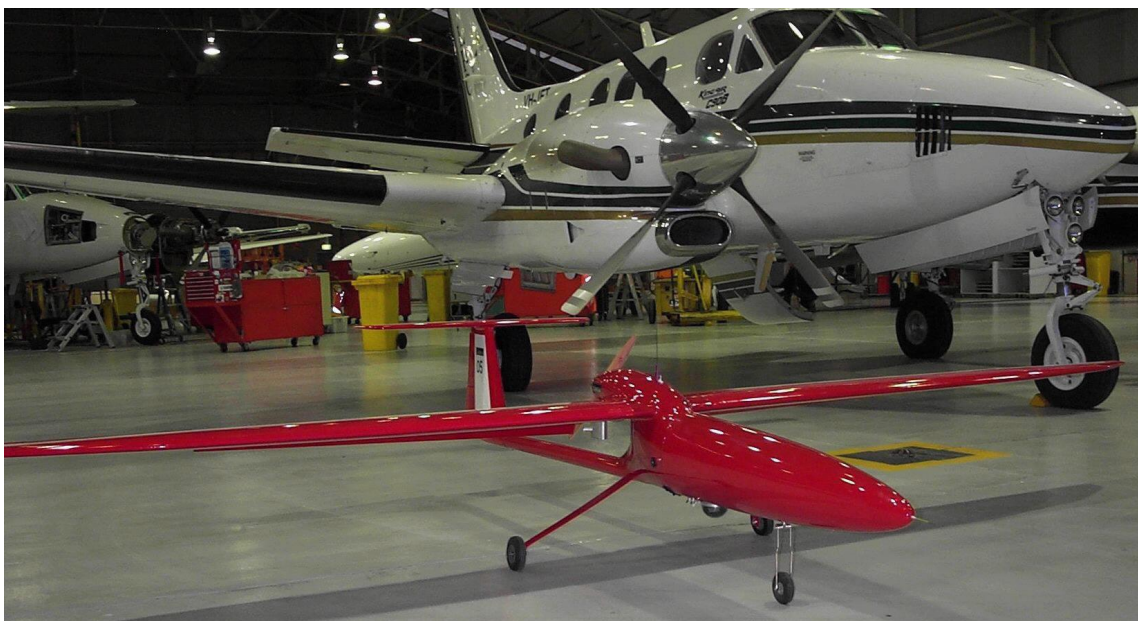


SILVERTONE FLAMINGO UAV

Introduction, Overview and General Specifications (3.5hp Motor)

The Silvertone Flamingo is designed to provide the UAV industry with a small, high efficiency and very versatile UAV suitable for the Under 20kg class of UAVs



Experience has shown that most customers have very definite preferences when it comes to the Avionics and Payload mix on any UAV. This fact coupled with Government regulations regarding export of UAVs fitted with Navigation Avionics has shaped our resolve to primarily concentrate on supplying the UAV industry with a range of elegant, versatile and aerodynamically efficient UAV airframes that can be tailored to customers requirements with ease. Hence our price list quotes prices for Flamingo Airframes less the navigation and payload avionics.

We are however quite prepared to work with our customers to fit whatever navigation and payload equipment their mission requirements dictate wherever possible. Fitting of suitable avionics packages to customers specifications will be quoted as a separate item once the customers requirements are made clear. To assist us in accurately quoting on your RFQ there is a short questionnaire at the end of our official price list.

Designed as a fully modular airframe, the Flamingo provides UAV operators with an airframe that offers absolutely unique features not found in other small UAVs including the choice of single or twin boom conversion. The twin Boom Flamingo allows larger motors and propellers hence heavier payloads or greater operational altitudes.

A very important side benefit of the high aerodynamic efficiency of the Flamingo is its ability to operate with smaller motors than usually found in 4 metre UAVs. This naturally reduces the fuel requirement and improves endurance.

An additional benefit arising from the efficient aerodynamic design being the viceless flight characteristics combined with an excellent speed envelope making the Flamingo an ideal UAV

trainer. These characteristics are much appreciated by Flamingo operators around the World and are probably the most commented upon features of the Flamingo..

At the end of the overview below are specifications of a very general nature as a guide to potential customers interested in the Flamingo.

OVERVIEW

Size and Weight

The size, weight and operating conditions over many discussions, firmed to that of;

- Duration in excess of that common in its size and class,
- While carrying a moderate payload
- At a moderate speed and Altitude
- At a low initial and operating cost
- Capable of operating from relatively unprepared airstrips- Modern clean design.

Payload Pannier

A truly novel feature of the Flamingo is the capacious quick change payload Pannier. The entire Pannier section may be replaced to allow the aircraft to be re-configured quickly for different missions. The Pannier can be constructed to suit the customers requirements with the payload mounted above, below or even with the Pannier plate mounted vertically, on each side of the Pannier plate. Access to the Pannier and payload is virtually unrestricted and there are no awkward or difficult to access areas in the payload bay.

Mission Capabilities

- Duration of up 7 hrs depending upon type and size of motor, AUW and throttle setting.
- Low comparative wing loading
- Low landing speed and take off speeds
- Excellent range for size and class of UAV
- Strong – designed to handle winds up to approximately. 32kph with safety margin
- Optimized layout for surveillance equipment
- Wing hard points for external payloads or additional fuel
- Mixed Flaps and Ailerons for wider range of operating conditions if required

Undercarriage

A very important component and one that will dictate absolutely the final performance of the aircraft.

The Flamingo is designed in such a way that the undercarriage may be configured in three ways.

(1) Fixed undercarriage. Ideal for local missions, pilot training and other tasks where landing and take off requires a fixed undercarriage.

(2) Drop off dolly. This is the configuration that is absolutely mandatory for long range, long endurance missions. For maximum aerodynamic efficiency the fuselage is tough enough to permit belly landings on return. A special tape may be fitted to the fuselage underside to minimise damage on landing. This configuration is also ideal for catapult launching.

(3) A small single wheel fitted to the fuselage as in full size gliders. The single boom configuration allows the safe use of the more efficient wooden Propellers even with the drop-off undercarriage.

Operational Benefits

- Low demand on consumables
- good fuel consumption

- Low maintenance costs – simple, strong design with good access
- Low initial and replacement cost
- Modular construction – flexible use- specific mission adaptable-
- Easy to fly and operate

Design Features.

The Flamingo is a very versatile, truly modular 4 metre (14ft) aircraft capable of being configured easily and cheaply to the customer's exact requirements. In many cases this reconfiguration may be carried out by the operator by simply purchasing sub-assemblies more suited to the task at hand. This unique and remarkable modular design allows the aircraft to be configured very simply and by the customer, even as a Single boom pusher or Twin boom pusher.

Markets Local/Export

- Pastoral live stock inventory; Mustering
- Agriculture - Farm management; crop growth; crop damage; water storage.
- Environmental monitoring; fence damage.
- Security/Military - Surveillance; intelligence; Target drones.
- Real Estate/Mining - Property images/mine layout/environmental monitoring

Dimensions and Performance. Quoted for a 3.5hp motor driving a 16 x 8 wooden propeller.

- Wing Span 4 Meters
- Length 2.9 Meters
- Empty weight –dry 10 Kg
- Weight- wet – 12-15 kG – Max fuel load
- Design Max Payload – 10kg.
- Max flying weight – 20kg. AUW to be balanced between payload and fuel
- Nose-cone volume - 1,300 cu/in

Endurance;

- The 5.6 litre Fibreglass fuselage fuel tank will deliver up to 7 hours depending upon a range of factors such as the aircraft AUW, motor type and size, throttle setting etc. Silvertone will work closely with the customer in order to deliver the aircraft and motor combination best suited to mission requirements.

Speed;

- Top speed -90mph - 144kph – 78 kts
- Cruising speed – 70mph – 96kph – 52kts
- Stall speed- no flap – 20kg – 36mph approx – 58kph – 32kts
- Stall speed- Flaps – 20kg – 28mph approx – 44kph – 24kts
- Speed range – 20kg – 90 to 30 mph ie ratio of 3:1
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